# CHAPTER 4.0
# ENVIRONMENTAL SETTING

This section provides a general description of the environmental setting of the proposed project. Information developed for the setting was established at the time of release of the July 2007 Notice of Preparation (NOP). A more detailed description of the environmental setting as it relates to each of the environmental issues addressed in this EIR is provided in Sections 5.1 through 5.11.

The project site consists of approximately 83 acres of land and is located in the southeastern portion of Carlsbad. Located 30 miles north of downtown San Diego, Carlsbad is a city with a population of approximately 101,000 people. Carlsbad is bordered to the north by Oceanside, to the south by Encinitas, to the east by Vista and San Marcos and San Diego County, and on the west by the Pacific Ocean. The project site is generally located northeast of the intersection of La Costa Avenue and Rancho Santa Fe Road (see Figure 2.0-1 in Section 2.0 Executive Summary of this EIR). Regional access to the site is provided by I-5, located approximately 3.8 miles west of the site. Local access to the project site is provided by Rancho Santa Fe Road and La Costa Avenue.

The project site elevation ranges from a low of approximately 260 feet AMSL in the canyon north of the La Costa Avenue entrance to a high of approximately 400 feet AMSL on the northern portion of the site. The site slopes generally to the south. Currently, the project site consists of vacant, undeveloped land. The northwest portion of the project site, including the proposed multifamily residential parcel, was previously graded as a part of the realignment of Rancho Santa Fe Road. Existing or planned single-family residential communities are located to the north, east, south, and west of the project site; and a small community-serving commercial center is located to the southwest, at the intersection of La Costa Avenue and Rancho Santa Fe Road. Local neighborhood parks are scattered throughout the neighborhoods surrounding the site with larger recreation parcels near a secondary school approximately 0.5 miles south of the site. A steep hillside begins approximate 0.3 miles northeast of the project site, separated from the project site by a small residential community, providing a large backdrop of natural open space rising to over 1,000 feet AMSL.

The proposed La Costa Town Square project site is located within the coastal subprovince of the Peninsular Ranges Geomorphic Province, near the western edge of the southern California Batholith. The bedrock underlying the majority of the project site consists of volcanic/metavolcanic rock of the Santiago Peak Volcanics. Sandstone bedrock of the Delmar Formation underlies the southwesterly portion of the site. Sedimentary bedrock of the Lusardi Formation locally underlies a canyon and lower natural slope area in the southeasterly portion of the site.

As is common in most of southern California, the project site is located within a seismically active region. No active fault is known to exist on or in the immediate vicinity of the project site, and the site is not located within an Earthquake Fault Zone. The nearest active fault is the Rose Canyon Fault Zone, located approximately 7 miles west of the project site.

The project site is located in an area of mild Mediterranean climate, characterized by moderate year-round temperatures. In the summer, ocean breezes blow inland providing cool temperatures during the day. At night, the wind reverses direction and the breezes blow from land to sea. Santa Ana winds periodically affect this pattern and bring hot and dry air blowing from land to sea for two- or three-day periods, typically during fall months. Average seasonal temperatures range from the low 70s in the summer to low 50s in winter. The overall average temperature is 61 degrees Fahrenheit. An average of 10 inches of rainfall occurs each year, predominantly between November and April.

The proposed project site is located within the San Diego Air Basin. The San Diego Air Basin is a nonattainment area for federal and state air quality standards for ozone and state standards for particulate matter less than 10 microns in diameter ($PM_{10}$) and 2.5 microns in diameter ($PM_{2.5}$). Air pollutants transported into the basin from the adjacent South Coast Air Basin (Los Angeles, San Bernardino, Orange, and Riverside counties) substantially contribute to the nonattainment conditions in the San Diego Air Basin. Motor vehicles are the major generators of air pollutant emissions in the vicinity of the project site. Rancho Santa Fe Road and La Costa Avenue carry local and through traffic emitting exhaust pollutants. Currently, the project site generates no stationary or mobile source emissions other than occasional vehicles traversing the project site along the dirt roads.

The project site is located within the Carlsbad Hydrologic Unit. The entire hydrologic unit is a triangular area of approximately 210 square miles, extending from Lake Wohlford on the east to

the Pacific Ocean on the west, and from the city of Vista on the north to Cardiff-by-the-Sea on the south. The hydrologic unit includes the cities of Oceanside, Carlsbad, Encinitas, Vista, and Escondido. The area is drained by Buena Vista, Agua Hedionda, San Marcos, and Escondido creeks. The Carlsbad Unit contains three major coastal lagoons: Buena Vista, Agua Hedionda, and Batiquitos.

The following six vegetation communities have been identified within the project site: Diegan coastal sage scrub, disturbed coastal sage scrub, native grassland, nonnative grassland, riparian scrub, and disturbed seasonal ponding areas. The site also has five ponded areas. The remainder of the site is disturbed or developed. A total of 87 plant species have been identified on the site. Approximately 62 percent of the species are native to southern California, while the remaining 38 percent are introduced species.

The project site is located within the HCP/OMSP (City of Carlsbad 1995a). All six vegetation communities listed above are considered sensitive on the project site by resource agencies due to either restricted range or cumulative losses throughout the region. The ponded areas were surveyed in 2001 and 2004 and found to be negative for the San Diego fairy shrimp and no further surveys are required. The lack of identification of vernal pool indicator plant species in three of the pools and negative results of the protocol focused surveys for endangered fairy shrimp species in all five pools suggest these basins do not appear to be naturally occurring vernal pools. The property also contains 0.06 acre of wetland and 0.35 acre of nonwetland jurisdictional waters of the U.S.

Seven sensitive and noteworthy plant species have been observed on the project site: thread-leaved brodiaea, Orcutt's brodiaea, California adolphia, southwestern spiny rush, western dicondra, Palmer's grappling hook, and small-flowered microseris. One other sensitive plant species, the San Diego thornmint, was identified in the California Natural Diversity Database (CNDDB) as historically occurring on the project site, although one rare plant survey in conducted in 2006 did not document this species. All of these species are covered by the HCP/OMSP, with the exception of the small-flowered microseris.

The California gnatcatcher, a federally threatened species, has been observed onsite. In addition, the following four sensitive bird species have been observed on the project site: California horned lark, yellow-breasted chat, white-tailed kite, and southern California rufous-crowned sparrow. In addition, the following three California species of special concern were

found on the site or in the vicinity of the site during previous surveys: western spadefoot, loggerhead shrike, and Belding's orange-throat whiptail. All of these species are covered by the HCP/OMSP. No observed wildlife movement corridors are present on the project site.